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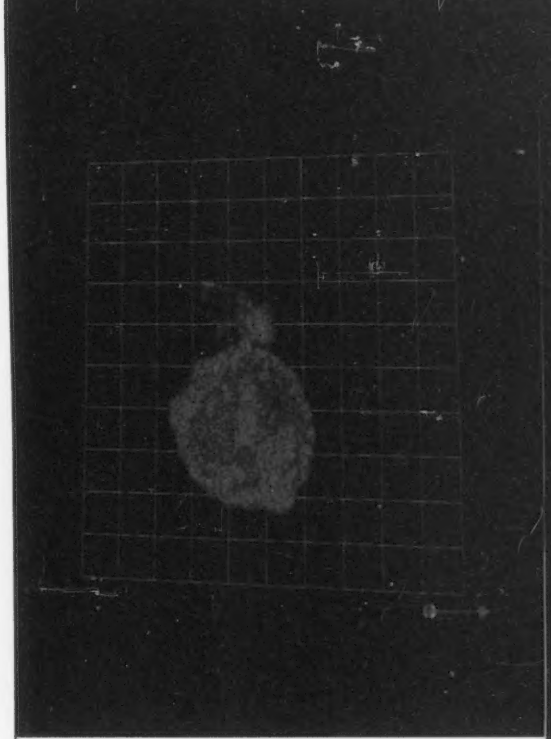

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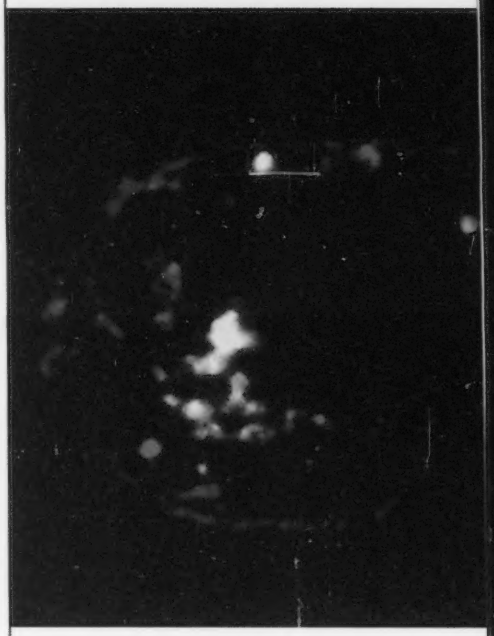

Activated macrophages compartmentalize their secreted cytokines (red and green) into distinct but overlapping trafficking vesicles (blue).
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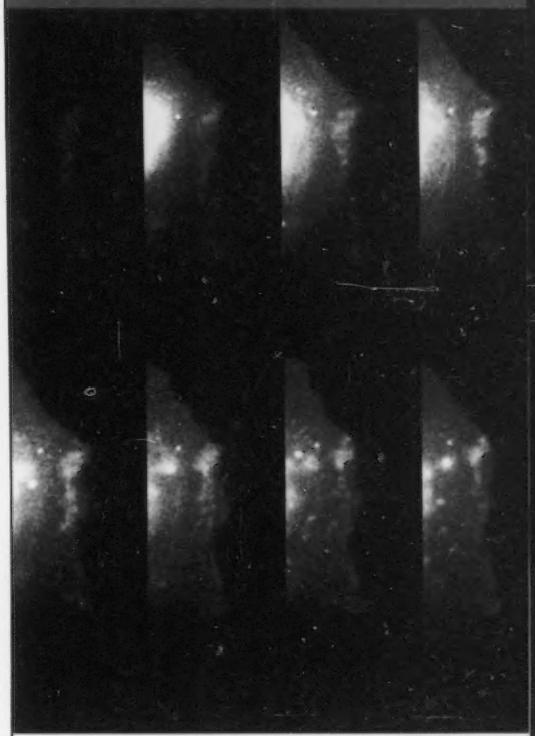

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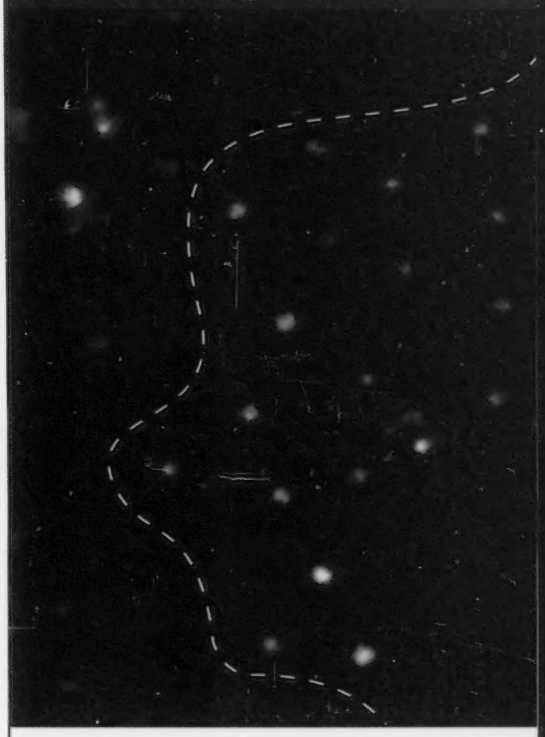

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713 Two ways to condense
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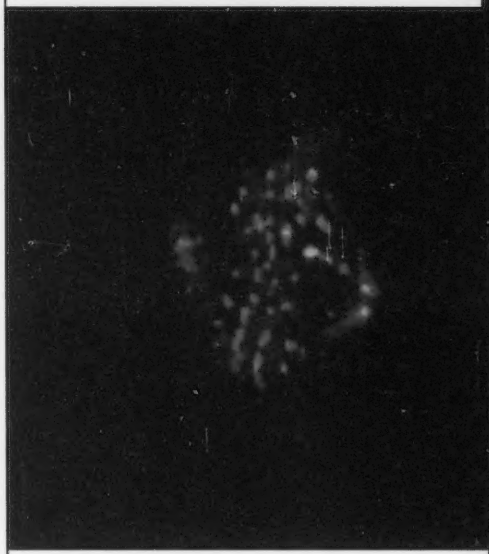

NudE/NudEL (red) recruits dynactin (green) to the kinetochore, but then remains there long after dynactin has departed to the spindle pole.
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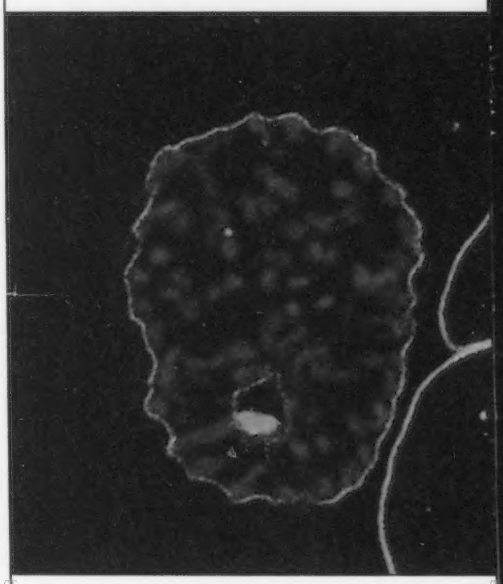

The mechanics of nuclear envelope (green) breakdown are revealed in a newly developed in vitro assay.
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785 Functional association of Sun1 with nuclear pore complexes

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799 The yeast integral membrane protein Apq12 potentially links membrane dynamics to assembly of nuclear pore complexes
John J. Scarcelli, Christine A. Hodge, and Charles N. Cole

813 A nuclear envelope protein linking nuclear pore basket assembly, SUMO protease regulation, and mRNA surveillance
Alaron Lewis, Rachael Felberbaum, and Mark Hochstrasser

829 Deletion of tumor necrosis factor death receptor inhibits amyloid β generation and prevents learning and memory deficits in Alzheimer's mice
Ping He, Zhenyu Zhong, Kristina Lindholm, Lilian Berning, Wintana Lee, Cynthia Lemere, Matthias Staufenbiel, Rena Li, and Yun Shen

843 Rap1-PDZ-GEF1 interacts with a neurotrophin receptor at late endosomes, leading to sustained activation of Rap1 and ERK and neurite outgrowth
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861 Nectin-like proteins mediate axon–Schwann cell interactions along the internode and are essential for myelination
Patrice Maurel, Steven Einheber, Jolanta Galinska, Pratik Thaker, Isabel Lam, Marina B. Rubin, Steven S. Scherer, Yoshinori Murakami, David H. Gutmann, and James L. Salzer

875 Neurofascin assembles a specialized extracellular matrix at the axon initial segment
Kristian L. Hedstrom, Xiaoming Xu, Yasuhiro Ogawa, Renato Frischknecht, Constanze I. Seidenbecher, Peter Shrager, and Matthew N. Rasband

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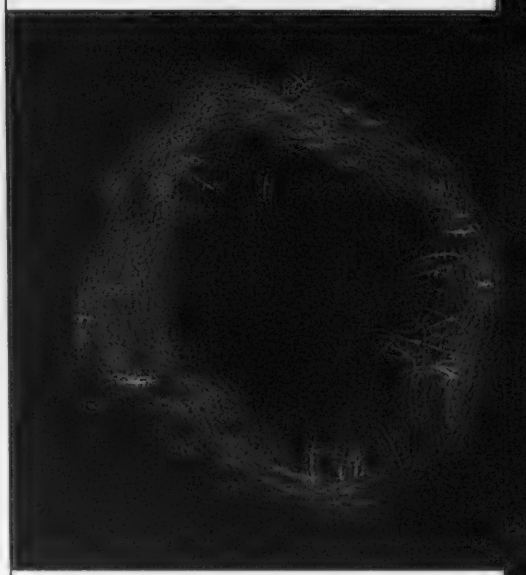
887 Checkpoint silencing during the DNA damage response in *Caenorhabditis elegans* embryos
Antonia H. Holway, Seung-Hwan Kim, Adriana La Volpe, and W. Matthew Michael



3D reconstructions of the fission yeast contractile ring suggest it is composed of two semicircles of oppositely oriented F-actin bundles (red and blue).
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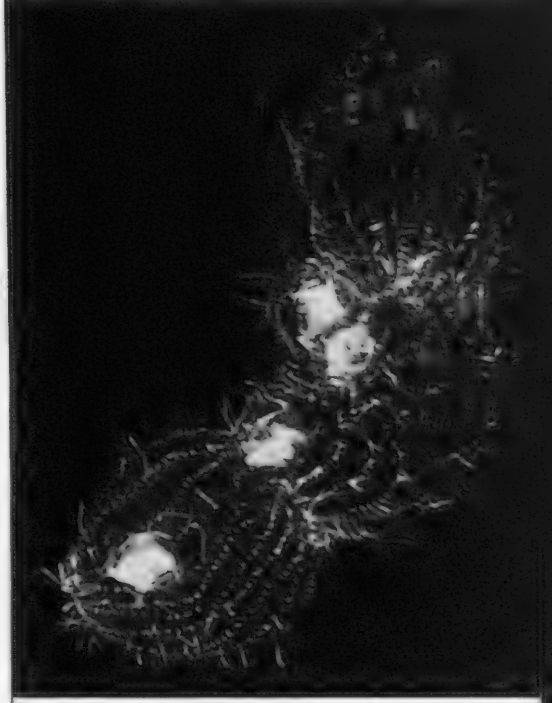

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Without katanin, microtubules in *Tetrahymena* cilia (yellow) are cut down, but internal microtubules are stabilized.
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995 A novel role for IGF-1R in p53-mediated apoptosis through translational modulation of the p53-Mdm2 feedback loop
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1009 SAG/ROC2 E3 ligase regulates skin carcinogenesis by stage-dependent targeting of c-Jun/AP1 and IκB-α/NF-κB
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1025 Parkin-mediated K63-linked polyubiquitination targets misfolded DJ-1 to aggresomes via binding to HDAC6
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1039 uPA deficiency exacerbates muscular dystrophy in *MDX* mice
Mònica Suelves, Berta Vidal, Antonio L. Serrano, Marc Tjwa, Josep Roma, Roser López-Alemany, Aernout Luttun, María Martínez de Lagrán, Maria Àngels Díaz, Mercè Jardí, Manuel Roig, Mara Dierssen, Mieke Dewerchin, Peter Carmeliet, and Pura Muñoz-Cánoves

1053 Defective microtubule-dependent podosome organization in osteoclasts leads to increased bone density in $Pyk2^{-/-}$ mice
Hava Gil-Henn, Olivier Destaing, Natalie A. Sims, Kazuhiro Aoki, Neil Alles, Lynn Neff, Archana Sanjay, Angela Bruzzaniti, Pietro De Camilli, Roland Baron, and Joseph Schlessinger

1065 Katanin regulates dynamics of microtubules and biogenesis of motile cilia
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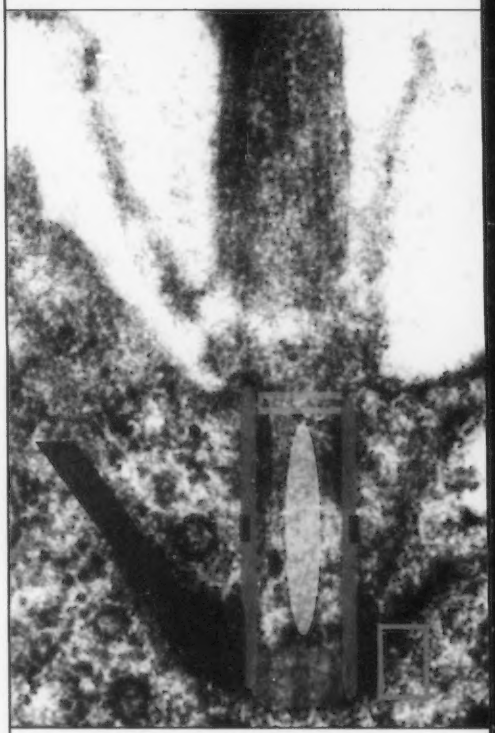
1081 Kinesin-5 regulates the growth of the axon by acting as a brake on its microtubule array
Kenneth A. Myers and Peter W. Baas



A proteomic analysis of the *Tetrahymena* basal body uncovered novel components that were localized to discrete domains (colors) of the structure.
See page 905.

The transcriptional repressor UTF1 (colors) associates stably with chromatin and prods embryonic stem cells to differentiate.
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1109 APC mutations lead to cytokinetic failures in vitro and tetraploid genotypes in *Min* mice
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1121 Nuclear mRNA export requires specific FG nucleoporins for translocation through the nuclear pore complex
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1133 The Rpb7p subunit of yeast RNA polymerase II plays roles in the two major cytoplasmic mRNA decay mechanisms
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1145 Inhibition of nonsense-mediated mRNA decay (NMD) by a new chemical molecule reveals the dynamic of NMD factors in P-bodies
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1161 Tim54p connects inner membrane assembly and proteolytic pathways in the mitochondrion
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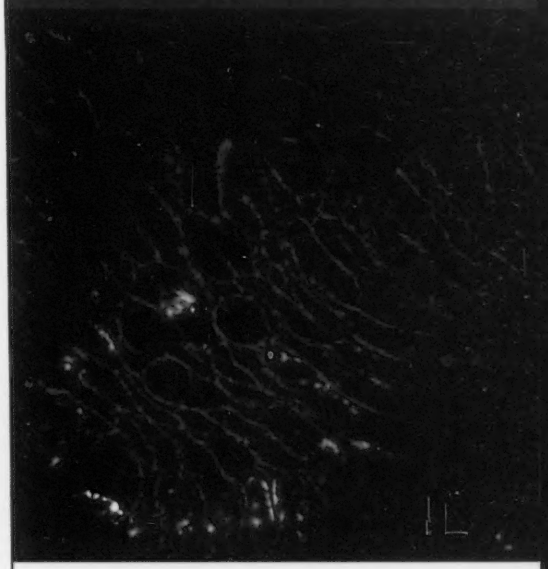
1177 Control of nuclear centration in the *C. elegans* zygote by receptor-independent Gα signaling and myosin II
Morgan B. Goulding, Julie C. Canman, Eric N. Senning, Andrew H. Marcus, and Bruce Bowerman

Articles with related stories in the IN THIS ISSUE section have page numbers in RED.



On the cover

Mouse intestinal cells with mutant APC misorient the mitotic spindle (green) and end up with extra chromosomes (blue) that might provoke colon cancer.
See page 1109.

1193 Myo4p is a monomeric myosin with motility uniquely adapted to transport mRNA
Brian D. Dunn, Takeshi Sakamoto, Myoung-Soon S. Hong, James R. Sellers, and Peter A. Takizawa

1207 Actin–myosin network reorganization breaks symmetry at the cell rear to spontaneously initiate polarized cell motility
Patricia T. Yam, Cyrus A. Wilson, Lin Ji, Benedict Hebert, Erin L. Barnhart, Natalie A. Dye, Paul W. Wiseman, Gaudenz Danuser, and Julie A. Theriot

1223 The protein tyrosine phosphatase Pez regulates TGFβ, epithelial–mesenchymal transition, and organ development
Leila Wyatt, Carol Wadham, Lesley A. Crocker, Michael Lardelli, and Yeesim Khew-Goodall

1237 Proteolysis and membrane capture of F-spondin generates combinatorial guidance cues from a single molecule
Sophie Zisman, Karen Marom, Oshri Avraham, Lilah Rinsky-Halivni, Uri Gai, Gilit Kligun, Vered Tzarfaty-Majar, Tatsuo Suzuki, and Avihu Klar

1251 Cofilin recruitment and function during actin-mediated endocytosis dictated by actin nucleotide state
Voytek Okreglak and David G. Drubin

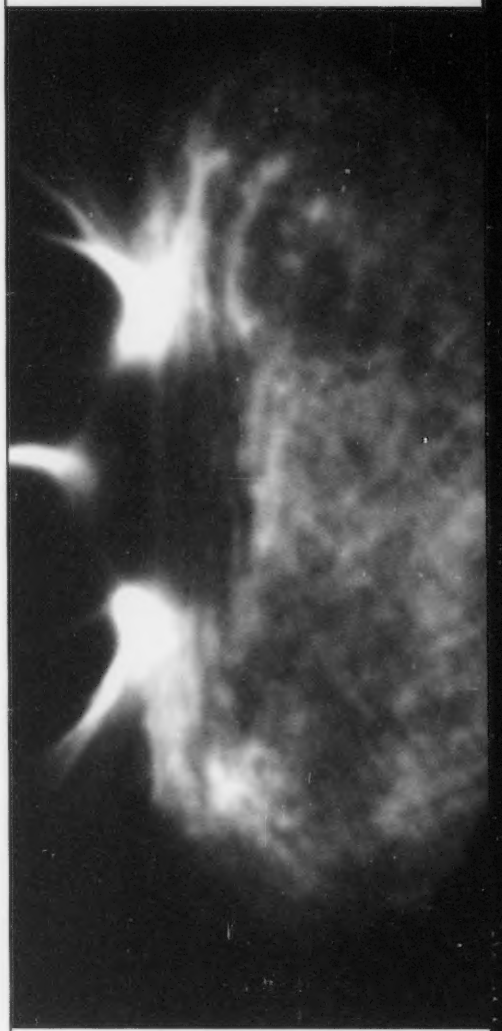
1265 The type III effector EspF coordinates membrane trafficking by the spatiotemporal activation of two eukaryotic signaling pathways
Neal M. Alto, Andrew W. Weflen, Matthew J. Rardin, Defne Yarar, Cheri S. Lazar, Raffi Tonikian, Antonius Koller, Susan S. Taylor, Charles Boone, Sachdev S. Sidhu, Sandra L. Schmid, Gail A. Hecht, and Jack E. Dixon

1279 RhoG regulates endothelial apical cup assembly downstream from ICAM1 engagement and is involved in leukocyte trans-endothelial migration
Jaap D. van Buul, Michael J. Allingham, Thomas Samson, Julia Meller, Etienne Boulter, Rafael García-Mata, and Keith Burridge

1295 The EphA4 receptor regulates dendritic spine remodeling by affecting β1-integrin signaling pathways
Caroline Bourgin, Keith K. Murai, Melanie Richter, and Elena B. Pasquale

Corrections

1309 A role for Rab5 in structuring the endoplasmic reticulum
Anjon Audhya, Arshad Desai, and Karen Oegema



Just before this epithelial cell becomes motile, its symmetry is broken by an increase in the flow of actin (white) in the rear.
See page 1207.